

ALTERNATING PHASE MASK BUILT BY ADDITIVE FILM DEPOSITION

Abstract

The invention provides a method of forming a phase shift mask and the resulting phase shift mask. The method forms a non-transparent film on a transparent substrate and patterns an etch stop layer on the non-transparent film. The invention patterns the non-transparent film using the etch stop layer to expose areas of the transparent substrate. Next, the invention forms a mask on the non-transparent film to protect selected areas of the transparent substrate and forms a phase shift oxide on exposed areas of the transparent substrate. Subsequently, the mask is removed and the phase shift oxide is polished down to the etch stop layer, after which the etch stop layer is removed.